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The Indian Strategy of One Health Concept

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Introduction- In nature, every microenvironment is provided with the resources necessary for the health care needs of the organisms living in. It is a widely accepted fact that the Indian Traditional Knowledge plays a key role in the pluralistic health care system concept. People believe that many of the health care questions arising in developing countries can be answered by this pluralistic approach. The "One Health Concept" is grabbing attention worldwide where the concept of health care is addressed to all living beings in the environment- human beings, animals and plants. An embracing approach towards Traditional system of medicine is getting due attention regarding the safety and efficacy of the products used. The techniques to learn these non-codified knowledge systems are refined and reoriented. One such technique is a Trans-disciplinary approach where the learning starts with an intradisciplinary analysis for understanding all the dimensions of a particular discipline. It would always be speculative to trace lines of congruence between kingdoms and species, from the platform of modern medicine. On the other hand, there are some systems of medicines where life is always perceived akin. Hence, in those systems, health care is pertinent with one another and so is the treatment schedule.

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The Indian Strategy of One Health Concept

Sreeja Nair

Introduction

In nature, every microenvironment is provided with the resources necessary for the health care needs of the organisms living in. It is a widely accepted fact that the Indian Traditional Knowledge plays a key role in the pluralistic health care system concept. People believe that many of the health care questions arising in developing countries can be answered by this pluralistic approach. The "One Health Concept" is grabbing attention worldwide where the concept of health care is addressed to all living beings in the environment-human beings, animals and plants. An embracing approach towards Traditional system of medicine is getting due attention regarding the safety and efficacy of the products used. The techniques to learn these non-codified knowledge systems are refined and reoriented. One such technique is a Trans-disciplinary approach where the learning starts with an intradisciplinary analysis for understanding all the dimensions of a particular discipline. It would always be speculative to trace lines of congruence between kingdoms and species, from the platform of modern medicine. On the other hand, there are some systems of medicines where life is always perceived akin. Hence, in those systems, health care is pertinent with one another and so is the treatment schedule. Most of such systems study the pattern of life in all living beings, then the health status and finally intervene through a more or less analogous treatment method for all living beings. There might be difference in dose, administration or combinations based on the species, body weight, digestion pattern or habitat but the family of medicines are mostly the same.

The thought of one treatment can be further cemented based on the ancient and traditional system of treatment, which is now named as 'Ethnomedicine'. Traditional health care practices are in effect from centuries and have been passed down orally through generations (Martin et al., 2001). Livestock keepers relied on traditional practices even before the Modern medicine broke in. The scientific study of people-plant relationship with the usage of plants for health and wellbeing is termed 'Ethno botany' (Mathias, 2004). The term was firstcoined by the American botanist Dr. John William Harshberger, in 1895, in a lecture at Philadelphiato describe his field of inquiry. In his words, Ethnobotany is the study of "plants used by primitive and aboriginal people." In 1896, Harshberger published the term and suggested 'Ethnobotany' as a field which can throw some light on the 'cultural position of the tribes who depended on plants for food, shelter and clothing'.

A further nomenclature as 'Ethno Veterinary Medicine' and much more diplomatically as 'Ethno Veterinary Practices' is also in use for Traditional Animal Health Care Practices contemporarily. Ethno Veterinary Practices(EVP) are bunches of non-documented practical experiences on animal health care, which are transmitted through generations orally, with its origin back in 1800 B.C. during the reign of King Hamurabi of Babylon who formulated laws on veterinary fees and charged for treating cattle and donkeys (Van Veen, 1996). EVP often provides cheaper and easier options andas a result, many parts of the world are interested in the field of Ethno Veterinary research and development (Zschocke et al., 2000; Masika et al., 2000; Kone and Atindehou, 2008;Raikwar and Maurya, 2015). 80% of the world depends of such traditional practices for health care as per the World Health Organisation.

In cases where all other documented systems of treatment flounder, these non-documented medicines play wonders. In certain other cases, a balanced implementation of all the systems work well, which proves that all the systems consider life as a whole for all living beings. Though a modern intervention is very much necessary in certain acute and emergency cases, a follow up with any alternative technique can cure the condition to the hilt.

Ethno Veterinary Practices can mostly be related to Ayurveda, the ancient and holistic Indian system of medicine from 6000 B.C. Ayurvedic medical textbooks are written in Sanskrit, one of the oldest recorded languages of the world. The word 'Ayurveda' means "science (ved) of life (ayur)" in Sanskrit.

Indian medicine adopted an observational and rational procedure by the end of the Vedic period and emerged as Ayurveda, which gave the basic model of animal health care. Most of the documents of Ayurveda are in the ancient Indian language called Sanskrit, written by Palakapya, the father of Indian surgery (Palakapya, 1894; Mukhopadhyaya, 1926).

Gau-ayurveda (cows), Hastyayurveda (elephants), Ashvaayurveda (horses), Mrig-Ayurveda (animals), Vriksha-ayurveda (plants) etc are the various Ayurvedic text books written and followed by Indians during ancient eras. In the Indian epic Mahabharatham, it is mentioned that the two Pandavas, Nakula and Sahdeva were experts in veterinary medicine who

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mastered the use of plants for animal welfare (NakulaSamhita). Majority of the plants used by them are extinct already due to climatic drift and global warming. Most of the Ayurvedic herbs are unique, and used to grow in the exceptionally diverse panoply of ecosystems found only in India, supported by the more tropical climate and richly volcanic soil specific to the Himalayas and other mountain ranges (Boswellia serrate, Shilajeet). Hence preserving medicinal flora grabs equal importance in the current scenario.

Mahabharatam (~3000 bc) even introduces an animal trainer and a caretaker. Somavanshi has reviewed the ethnoveterinary resources in ancient India (Somavanshi, 1998). Chapters describing animal health care practices are there in Indian text books like SkandaPurana and Devi Purana.

Mrig Ayurveda or Animal Ayurveda is quoted from Rig Veda, the ancient religious text book of India (2000 to 4000 BC) where the practices are focused on animal welfare, treatment, management and surgery which were safe and effective and even with the backup of clinical trials. Ayurvedic Materia Medica, Mrig Ayurveda, Aswa Ayurveda (horse Ayurveda) and Hasti Ayurveda (elephant ayurveda) are the first text books in Veterinary Practices written by Salihotra. The first Veterinary Hospital was started by King Oshika in 1463 BC, and they depended exclusively onAyurvedic Botanicals.

Veterinary Ayurvedic text books explain a variety of edible products with indication of the different properties suitable for animals of a given temperament, comportment and health status, living in a particular climate and at a particular time of the day. A feed which is considered safe for a healthy animal may complicate another with a disease. Horses were never fed with grass, as it was said to weaken the vitality. Barley, beans and butter were considered good for pregnant mares. Sea salt is said to cure gastric disturbances, venous diseases and horses with sleeping difficulties, but it was not recommended for very old or very young horses. (Blondeau, 1972; Mazars, 1994).

In addition to medicines, Ayurveda also supports the administration of tonics and stimulants (rasayana), and aphrodisiacs (vajikarana) for enhancing general health. There were rasayana elixirs prescribed to strengthen animals and also for disease prevention.

A mixture of Asparagus racemosus, Emblicaofficinalis, Terminaliabellerica, Terminaliachebula, Tinosporacordifolia and Zingiberofficinale and a piece of buffalo horn based on aconite and three peppers was widely in use for extending the life span of horses.

Charaka Samhita (Siddhisthana, XI, 20-26) gives the formula for an enema mixture which can be used in elephants, camels, cattle, horses and sheep. The basic mixture contains a combination of Acoruscalamus, Glycyrrhizaglabra, Piper longum, Randaspinosa and Saussurealappa. A dozen of other plants are to be added to the basic ingredients for elephant enemas. For cattle, Buteamonosperma, Cedrusdeodara and Terminaliachebula should be added to the basic mixture. For Horses, Baliospermummontanum or Croton tiglium (Sharma, 1983) should be the addition to the base.

There are Traditional Ayurvedic alternatives to tonics, fortifiers and digestives, as well as anti-parasitic and antifungal products, most of which are polyvalent due to the multiplicity of ingredients in them. A stomachic and tonic containing 59 ingredients is manufactured by a company in Bangaluru, India, which is recommended for digestive disorders in animals. The main ingredients are Aeglemarmelos, Aquilariaagallocha, Buteamonosperma, Centratherumanthelminticum, Curcuma longa, Ferula narthex, Moringaoleifera, Piper longum, Punicagranatum, Terminaliabellerica, Terminaliachebula, Tinosporacordifolia, Trachyspermumammi and Zingiberofficinale, all of which are aperitive, digestive, stomachic and anthelmintic as perAyurvedic text books (Mazars, 1994). An ointment for sprains and sores is prepared from a mixture of Abrusprecatorius, Acoruscalamus, Celastruspaniculatus, Hyoscyamusniger, Moringaoleifera, Nardostachysjatamansi, Ocimum sanctum, Saussurealappa and Vitexnegundo. The combination is mixed with extracts of Anacyclus pyrethrum, Colchicum luteum, Curcuma amada, Gloriosasuperba, Litseasebifera, Myricanagi and Neriumodorum. (Chopra et al., 1956; Ambasta, 1986).

Nardostachysjatamansi mixed with the oil of Hyoscyamusnigercan be used as an antineuritic.

Ocimumtenuiflorum and Vitexnegundo can be used for wound dressing.

Curcuma amada root can be used to cure contusions and sprains.

Colchicum luteum extract can be used as an analgesic.

The evidence of health care provided for animals as mentioned in Ayurvedic text books states that veterinary medicine was so advanced from years aback. Documents with emphasis on the safety, efficacy, and dosing of medicinal herbs are available in Ayurvedic text books, that can guide a veterinarian in following Ethno Veterinary Practices

It is more like giving a wide angle to our belief of healthcareand wellbeing. A holistic approach towards animal health care can join hands with human health care, concluding that there is only 'one form of life, one pattern of health status and one line of treatment'.

In order to revitalize traditional practices, they have to be documented, assessed and promoted for community usage. Research and development can strengthen the local health traditions and bring scientific reasoning to the plant bases used in traditional treatment. Ethno Veterinary Practices need to be

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understood in all possible dimensions and all necessary worldviews so that they can be assessed in a way that is universally acceptable. Ethno Veterinary practices need to be mainstreamed for the use of field veterinarians through veterinary education and research.

The Indian Government has given a new impetus to these practices recently. Study and practice of traditional medicine has been regulated, and training is provided by various hospitals and care centres. Traditional practices got revised and revived as a result of plentiful movements. There are certain Indian laboratories where these ancestral recipes are followed for animal health care product manufacture. Hopefully, the campaign gets more recognition and acquiescence universally, setting the scene for a better health of all living beings by virtue of the solidarity of all the health care systems followed ubiquitously.

Glossary of Terms

1. Non-codified/Non-documented– Without the support of any written documents or language codes
2. Trans disciplinary– Relating to more than one discipline of knowledge
3. Intradisciplinary– Relation within the same discipline of knowledge
4. Ethno– A particular society and it's culture in the purest form
5. Ayurveda– The traditional Indian system of medicine based on the balance between bodily systems and their functions
6. Sanskrit– Ancient classical South Asian language
7. Mahabharatham- One of the two major Sanskrit epics of ancient India
8. Pandavas– Five brothers who are the main characters in Mahabharatham
9. Rig Veda– Oldest known Indian sacred canonical text with a collection of Sanskrit hymns

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